April 23, 2004

CORRECTED COPY

FILED ELECTRONICALLY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

RE: In the Matter of Carriage Digital Television Broadcast Signals, *et al.*
Ex Parte Submission
CS Docket Nos. 98-120, 00-96 and 00-2

Dear Ms. Dortch:

Attached is a corrected copy of the white paper concerning multicast carriage that was jointly submitted by the NBC Television Affiliates, the CBS Television Network Affiliates Association, the ABC Television Affiliates Association and the NBC Television Station Group in the above-captioned proceedings on April 16, 2004. Please substitute the attached version of the white paper for the version previously submitted and replace the prior version with the new version in the record.

Please direct communications regarding this submission to the undersigned.

Respectfully submitted,

F. William LeBeau/aff

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Its Senior Regulatory Counsel

Attachment

cc: Chairman Michael Powell
Commissioner Kathleen Abernathy
Commissioner Michael Copps
Commissioner Kevin Martin
Commissioner Jonathan Adelstein
Jon Cody, Media Adviser to Chairman Powell
Stacy Fuller, Media Adviser to Commissioner Abernathy
Jordan Goldstein, Media Adviser to Commissioner Copps
Catherine Bohigian, Media Adviser to Commissioner Martin
Johanna Shelton, Media Adviser to the Commissioner Adelstein

April 16, 2004

Chairman Michael Powell
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

RE: In the Matter of Carriage Digital Television Broadcast Signals, *et al.*
Ex Parte Submission
CS Docket Nos. 98-120, 00-96 and 00-2

Dear Chairman Powell:

Cable carriage of all local television stations' digital programming will require far less capacity on today's digital cable systems than analog carriage. That simple reality – and the obvious consumer benefit of having continued access to all local stations' television programs – is a fundamental reason for the Commission to end the six years of debate and adopt multicast digital carriage.

The attached white paper, which is jointly submitted by the NBC Television Affiliates, the CBS Television Network Affiliates Association, the ABC Television Affiliates Association and the NBC Television Station Group, analyzes whether cable capacity is a real constraint in a digital environment. The White Paper concludes that U.S. television consumers can enjoy the benefits of multicast programming from all of their free, local television stations while reducing any burden of mandatory carriage on cable operators to levels far below those enacted by Congress and upheld by the Supreme Court in the 1990s.

The preservation of mandatory carriage for all local stations' free, over the air digital transmissions remains one of the last unresolved issues impeding the DTV conversion. Television broadcasters have made the substantial investments necessary to offer digital television to virtually all consumers. The key remaining obstacle to the digital transition outlined by Congress is whether consumers will be sufficiently persuaded of the value of the new technology to make their own digital investments. Mandated cable carriage of local television broadcast multicast programming will encourage broadcasters to invest the additional funds necessary to develop innovative services that will heighten consumer interest and thereby speed the transition. It also is necessary to protect consumers, as Congress has determined that cable otherwise has the incentive and the ability to deny consumers access to broadcasters' programming. That such access can be assured while lowering any burden on cable operators below that already required is another compelling reason for the Commission promptly to enact an anti-stripping prohibition that preserves all free multicast services.

Please direct communications regarding this submission to any of the undersigned representatives.

Respectfully submitted,

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Commissioner Kevin Martin
Commissioner Jonathan Adelstein
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Jordan Goldstein, Media Adviser to Commissioner Copps
Catherine Bohigian, Media Adviser to Commissioner Martin
Johanna Shelton, Media Adviser to the Commissioner Adelstein

DIGITAL MULTICAST MUST-CARRY:

GREATER PUBLIC BENEFITS,

LESS BURDEN ON CABLE OPERATORS

Prepared by

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Charles Jablonski, Independent Technical Advisor

at the request of

NBC Affiliate Broadcast Network, and
NBC Owned and Operated Station Division

OVERVIEW

Our nation is in the critical phase of the decades-long debate over the rights of free, local television stations to be assured carriage on cable television systems. Far more is at stake today than the relative well-being of the broadcast and cable industries.

The outcome of this debate will determine whether Americans will continue to enjoy a wealth of local video programming offering diverse viewpoints. It will determine whether Americans will be allowed to reap the full benefits of digital video technology after the government has compelled them to invest in digital television consumer technology.

The digital technology in which broadcasters invested hundreds of millions of dollars to comply with FCC plans makes it possible for local broadcast stations to offer consumers as many as six new television channels as a complement to their high definition offerings, while utilizing no more than the 6 megahertz of spectrum capacity legally allocated to them for digital transmission (known by engineers as 19.4 megabits per second of digital capacity). As broadcasters support themselves solely on the basis of advertising, such a plan can only work economically if all the programming material local stations offer using their 19.4 megabits per second is passed along to consumers. Otherwise, there is not enough reach to allow an advertising-based model to bring consumers quality local material free of charge. The question thus becomes whether cable systems will be obligated to carry all of the free, over-the-air video programming

transmitted by broadcasters at the conclusion of the DTV transition, or will they be permitted to block cable customers from receiving all but one of these valuable services?

The cable industry's resistance to "multicast must-carry" rests on the same arguments as its opposition to the must-carry obligation enacted into law in the 1992 Cable Act. The cable industry contends that it has invested billions of dollars in building out advanced high-capacity (750 MHz -- megahertz being the standard measure of cable capacity) digital cable systems and should be free to use that capacity in any way it sees fit, without regard to the public's interest in these free sources of information outside the ultimate control of cable operators. While cable operators tout the new services that can be provided with these upgraded cable systems, including high-speed Internet access, Video on Demand ("VOD"), and Voice over Internet Protocol ("VoIP") telephone service, they simultaneously claim that the capacity of these new digital cable systems is so limited that they cannot accommodate multicast carriage of local stations.

Such fears are unfounded. In the analog world, our television service was delivered via the equivalent of a two-lane one-way street. In the digital world, we can look forward to sixteen lane interstates, while the "digitized vehicles" are one-third the size and twice as fast.

The elimination of capacity constraint as an argument against multicast must-carry results from two major developments: (1) the wider interstate – i.e., the increase in cable system capacity from 450 MHz to 750 MHz or greater for cable systems that today

serve over 85 percent[1] of cable subscribers; and (2) the smaller, faster digitized vehicles – i.e., the broadcasters and cable operators shifting from analog to digital technology, enabling significantly more efficient use of the cable system's capacity. These developments produce the following physical and engineering realities:

1. Through digital transmission and compression, a 2007 digital cable system will be able to carry the entirety of a local station's digital broadcast output using only one-half of the cable capacity required to carry the equivalent analog broadcast output in 1992. A cable system is divided into "slots" through which programming channels or data services can be passed. Digital cable systems can squeeze two complete broadcast signals into one of these slots, which previously could only handle one signal.

2. Half of one standard cable slot is required to carry an entire full motion live high definition signal. Broadcasters also have the ability to send as many as six standard definition digital broadcast programs ("multicasting"), or a combination of high definition and multicasting, in that same standard slot. [2]

3. Carriage of all free, over-the-air digital broadcast programs in any given market will consume no more than 11-12% of a 750 MHz digital cable system's capacity, approximately one-third of the limit for local television stations.

4. Digital cable systems will be able to use the remaining 90% or so of their capacity to provide hundreds of cable programming networks, video-on-demand, high-speed Internet access, and telephony service.

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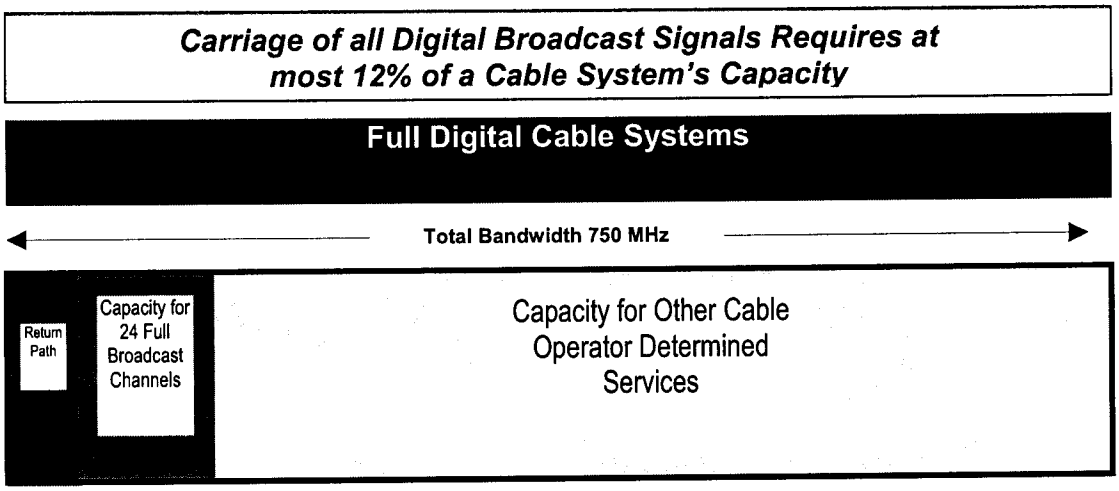
1 According to National Cable & Telecommunications Association ("NCTA"), 85 percent of cable subscribers are now served by cable systems of 750 MHz or greater capacity. *See* National Cable & Telecommunications Association, 2003 Year-End Industry Overview (Dec. 18, 2003) ("*NCTA 2003 Year-End Industry Overview*") at 2, available *at* http://www.ncta.com/pdf_files/Overview.pdf

2 Absent repeal of the must-carry law, the cable industry does not dispute that it is required to carry one free over-the-air digital high definition broadcast program following the DTV transition.

The following chart illustrates this new digital reality:



How do these physical and scientific realities translate into the actual allocation of capacity in digital cable systems? Today's typical 750 MHz digital cable system now can offer all the following to 100% of its subscribers:

- Almost 700 cable channels, or almost 200 high-definition cable channels, or a combination of both [*370 MHz*]
- Vastly expanded video-on-demand services available to all subscribers [*140 MHz*]
- Vastly expanded high-speed Internet access [*108 MHz*]
- Telephony services including Voice over Internet Protocol [*6 MHz*]
- 24 complete digital broadcast signals (including all programming streams), which is enough to provide full carriage of all local stations in the nation's biggest television markets [*72 MHz*]

In other words, even the most aggressive assumptions about new services demonstrate that digital cable systems will be significantly less burdened by full digital multicast must-carry than was the case in 1992. On today's 750 MHz digital cable

system, continued mandatory carriage of all free local television programming in no way constrains cable operators from providing a marvelous array of video programming and other non-video services. The real danger to Americans will come from a failure to require full carriage of broadcasters' local digital signals.

From a consumer and societal perspective, the dividends of multicast must-carry following the DTV transition are enormous:

- The nearly 70% of America's television households subscribing to cable will have access to vastly increased and targeted local programming focused on the news and events shaping communities in which they live. For example, viewers will be able to enjoy "hyper-local" news, with programmers devoting each of the multicast channels to a different segment of the market *(e.g.*, for the New York market, one could have Manhattan news, northern New Jersey news, Westchester County news, etc.). Alternatively, for a Spanish language broadcaster like Telemundo, multicasting creates the opportunity to serve not just Hispanics as a single group, but to program for Latino communities – Mexicans, Puerto Ricans, Argentines, etc. – with local and national programming created specifically for their interests.

- Viewers will enjoy more diverse viewpoints because multicasting enables broadcasters to offer more perspectives that, in the case of cable subscribers, will not be subject to selection by the cable operator.

- The DTV transition will accelerate because the certainty of even post-DTV transition multicast must-carry will lead broadcasters to initiate digital multicasting now, creating an immediate incentive for consumers to purchase DTV products.

- Cable and non-cable households alike will be able to enjoy the full functionality of the new digital television devices they will be required to purchase once analog broadcast signals are shut off – be it one spectacular HDTV program or up to 4-6 standard definition TV programs – rather than being limited to one program as in the old analog world.

- Advertisers will enjoy more local competition as both local television stations and cable operators will be able to offer increased advertising opportunities that can reach the entire local market.

Americans can enjoy all of these benefits while burdening the cable industry far less than was the case when Congress enacted must-carry in 1992.

The FCC has been wrestling with multicast must-carry following the DTV transition for nearly five years. Aided by significant industry cooperation, the Commission recently acted successfully on the issues of digital cable product compatibility and digital broadcast content protection. This leaves multicast must-carry as one of the last unresolved issues impeding the DTV conversion. It is time to adopt a post-DTV transition multicast must-carry requirement so that the exciting promises of a DTV future can begin to become reality for all Americans.

I. CABLE CARRIAGE OF ALL FREE DIGITAL BROADCAST PROGRAMMING WILL BE MUCH LESS A BURDEN ON CABLE CAPACITY IN 2007 THAN IT WAS IN 1992 WHEN MUST-CARRY WAS ENACTED

In 1992, when Congress required cable systems to retransmit the signals of all local broadcast television stations upon request, Congress included a capacity safeguard: no system has to employ greater than one-third of its total available capacity for the mandatory retransmission of local broadcast signals.[3] This safeguard ensures that at least two-thirds of each system's capacity is under the exclusive control of the cable operator.

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[3] Cable Television Consumer Protection and Competition Act of 1992 §§ 4 and 5, 47 U.S.C. §§ 534, 535.

By 2007, the "soft" statutory target date for the shut-off of analog broadcast signals,[4] capacity will be so abundant on digital cable systems that even in cities with the most broadcast television stations, such as Los Angeles, complying with the must-carry mandate will require no more than 11-12 percent of a cable system's total capacity. In most areas of the country, systems will need to devote only 4-8 percent of capacity to must-carry purposes.[5] This vastly reduced burden on digital cable systems is a result of the shift from analog to digital technology and increased capacity of the cable plant.

A. Digital Transmission and Compression Markedly Reduce the Capacity Required to Retransmit Broadcasters' Programs

Digital video programming transmission was not even a proven operational technology in 1992. By 2007, virtually all broadcasters and all major cable systems will have rebuilt their facilities to replace analog with digital transmission. Today, the cable capacity required to carry the entire digital broadcast signal is at most one-half the cable capacity that was required in 1992 to carry an entire analog broadcast signal. Digital cable systems retransmit a digital broadcast signal in only one-half of a standard cable "slot", compared to analog cable systems requiring a full slot to retransmit an analog

4 Congress established December 31, 2006 as a "soft" target date for the end of the DTV transition. *See* 47 U.S.C. § 309(j)(14).

5 In 2001, the FCC specified how to calculate available capacity on cable systems for must-carry purposes. For a typical 750 MHz system, the total usually is 696 MHz (750 MHz less the 54 MHz commonly used for uplink communications). Applying the FCC's calculation method, 232 MHz of a typical 750 MHz system (one-third of the 696 available MHz) defines the cap for broadcast signals. On a digital system this is enough capacity to retransmit 77 complete digital broadcast signals, more than three times the number of local broadcast signals in any market in the United States. *See Carriage of Digital Television Broadcast Signals*, CS Docket No. 98-120, *First Report and Order and Further Notice of Proposed Rulemaking*, 16 FCC Rcd 2598 at ¶¶ 37-41 (2001). Indeed, a typical 750 MHz digital system could carry up to 25 local television stations' analog *and* digital signals – including all digital multicast programming -- without exceeding the one-third of capacity statutory limitation.

broadcast signal in 1992.[6] Yet, this reduced slot size is able to carry the entire digital broadcast signal, including multiple streams of programming if a local station chooses to multicast.

By 2007, 750 MHz digital systems will be nearly universal in all but the most rural communities. These systems employ the 256-QAM modulation standard that has been adopted by the cable industry generally and is the basis for the Commission's adoption of cable compatibility requirements in 2003. The 256-QAM standard represents a significant enhancement in spectrum efficiency. Accepting the broadcast digital signal and retransmitting it in its entirety using 256-QAM will save digital cable systems 50 percent of the capacity devoted to analog broadcast signals. Even simply retransmitting the entire digital signal on an analog cable system in its native broadcast format requires no more capacity than that required for a single analog signal.[7]

B. Capacity of the Cable Plant Itself Has Substantially Expanded Since 1992

Cable operators have rebuilt their cable plant to increase the useable bandwidth to 750 MHz. This increase from the 450 MHz generally available in 1992[8] means that a cable operator has more capacity to sell to national or local advertisers. It means that a

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6 The digital over-the-air digital broadcast signal transmits a constant 19.4 mbps over the airwaves. This includes all overhead in addition to the actual program(s).

7 Cable operators are in the process of replacing analog set-top boxes with digital boxes. Digital systems are available to over 85 percent of cable subscribers, and over 30 percent (approximately 21.5 million) subscribed to digital cable services at the end of September 2003. *See* NCTA, 2003 Year-End Industry Overview at 6.

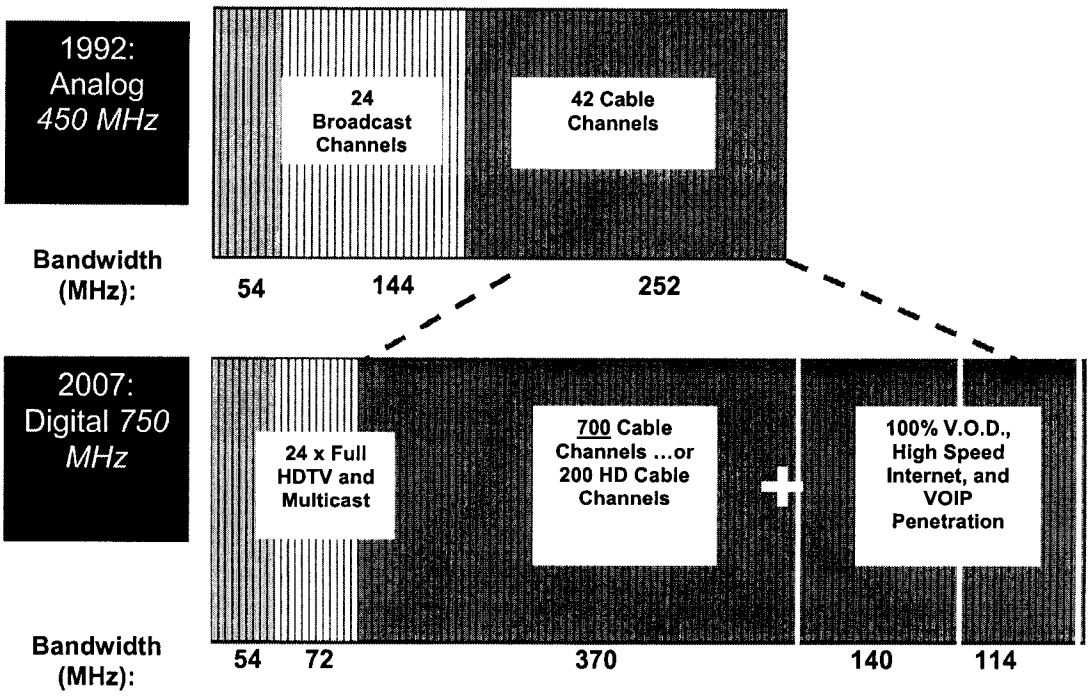
8 *See Annual Assessment at the Status of Competition in the Market for the Delivery of Video Programming* CS Docket No. 94-48, *First Report*, 9 FCC Rcd 7442, 7452 and 7567 (1994).

cable operator can offer a wider array of services. And it means that carriage of each broadcast station occupies proportionately less of a cable system's total capacity.

This increased cable capacity is being used to provide new services, such as VoIP telephony, broadband Internet access, and many new cable networks. It is important to emphasize that when broadcasting is all digital – 2007 is the goal – the digital broadcast signals in their entirety will comprise substantially less cable capacity than the analog channels today. No existing cable service or program will be foreclosed, and the transition to digital signals will open up more space on cable systems for new networks or more services.

The table below illustrates that cable system upgrades result in substantial increases in capacity to provide telephony, Internet, and video services and still retransmit all local digital broadcast signals in their entirety at the end of the transition.

CABLE BANDWIDTH INCREASE: 1992 VS 2007[9]



As the above illustrates, the typical digital cable system is organized by 6 MHz segments. Generally systems reserve the lowest 54 MHz to provide "upstream" or "return path" capability (home-to-cable system), resulting in there being available 696

[9] This chart is based on conservative assumptions, such as 24 broadcast stations, 700 subscribers per node for calculating dedicated services such as Video On Demand ("VOD") and Video over Internet Protocol ("VoIP"); and high definition video for VOD. In addition, we assume 100 percent of cable houses subscribe to VOD and that as many as 10 percent would use VOD simultaneously from the same node. Actual subscriptions and usage would be significantly lower. Similarly, we assume 100 percent subscription to broadband cable access (*i.e.*, no customers use DSL or dial-up) and that up to 50 percent of all customers download material continuously at the same time. In this extreme example, customers still are receiving downloads at speeds of 2 mbps, a higher average speed than cable or DSL today. VoIP allocation assumes set-aside of an entire 6 MHz, which allows for excess capacity over 100 percent utilization. With all of these extremely conservative assumptions, there remains 370 MHz for cable programming, which equates to 683 standard definition channels at 3.5 mbps or 185 high definition channels at 12.9 mbps, or a combination, for example 100 high definition channels plus 313 standard definition channels.

MHz of bandwidth for "downstream" (cable system-to-home) transmissions. Each 6 MHz channel is modulated with 256-QAM, resulting in 38.8 megabits-per-second ("mbps") capacity within each channel.

Digital over-the-air broadcasters also use 6 MHz channels, but the noise and interference inherent in using the airwaves result in less capacity being feasible for each. In broadcasting, the base 6 MHz channel is modulated with 8-VSB,[10] resulting in 19.4 mbps capacity for each channel. An over-the-air channel has to be much more robust than a cable channel due to signal propagation variables, various noise sources, and interference on the airwaves that must be overcome. The result is that an over-the-air channel is capable of carrying only one-half the amount of information that a cable channel – which is a wired closed circuit – can carry.

A cable system receives the digital 6 MHz broadcast signal modulating 19.4 mbps using 8-VSB and remodulates it using 256-QAM, resulting in a 3 MHz signal carrying the same 19.4 mbps. This 3 MHz signal is then paired with another similar signal and carried within a 6 MHz channel on the cable system. This digital-to-digital conversion does not entail degradation to the content of the signal and is transparent to viewers, but results in a 50 percent efficiency gain for cable when carrying digital broadcast signals.

Our figures are conservative. They are based on the Adelphia cable system in Los Angeles, which appears to be one of the cable systems carrying the most broadcast

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[10] Digital signals modulated with 8-VSB continuously transmit at a data rate of 19.4 mbps. Just as the FCC required use of the NTSC standard for analog, the FCC requires broadcasters to use the equivalent technical standard (ATSC) to ensure that digital television receivers throughout the country can receive all digital broadcasts. *See* 47 C.F.R. § 73.682(d).

stations in the country.[11] They also assume that all cable customers will subscribe to both VoIP telephony services and internet broadband services. Even with these assumptions, there remains sufficient capacity for 700 cable networks, 200 high definition channels, or any combination thereof.

C. It Takes The Same Bandwidth For A Digital Cable System To Carry As Many As Six Standard Definition Digital Broadcast Programs (Multicasts) As It Does To Carry One Full-Motion Live High Definition Digital Broadcast Program

Many (if not most) broadcast stations are transmitting high definition programs at select times during the day. These programs usually require full use of the entire 19.4 mbps capacity of the 6 MHz broadcast channel, particularly when broadcasting live sporting events. A broadcaster's decision to provide consumers multiple streams of standard definition programming – multicasting – does not change the capacity equation. High definition broadcasts therefore will require the full digital cable channel for retransmission. While multicasting creates a number of separate programming streams on the broadcast signal, their total aggregated bandwidth is identical to that necessary to transmit a single high definition programming stream.[12] A broadcast signal containing

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[11] Most systems carry significantly fewer broadcast stations and thus require even less bandwidth for full broadcast must-carry. Adelphia's Los Angeles cable system currently appears to carry more broadcast stations than any other system in the country. According to the *Television and Cable Factbook: Online*, Adelphia's Los Angeles system receives 21 broadcast stations off-air. However, according to the latest channel line ups for subscribers on Adelphia's Eagle Rock cable system, Adelphia is carrying a total of 24 broadcast channels. *See* Warren Communications News, Television and Cable Factbook: Online (visited March 1, 2004) (entry for ICA:CA00006); Adelphia's Channel Line Up available to Zip Code 90041 at http://www.adelphia.com/cable_entertainment/channel_line_up.com (visited March 1, 2004).

[12] The broadcast signal maintains a constant bandwidth of 19.4 mbps and occupies 6 MHz, but can be squeezed to half that size or less for cable retransmission with no loss in quality. The Commission has approved cable use of the required technologies so long as the original signal quality is maintained.

one high definition program uses the same amount of capacity as one containing multiple standard definition programs.

Consequently, requiring carriage of all multicast programs on a broadcast signal entails no extra burden on the cable operator. The number of programs is transparent to the cable system and is decoded at the consumers' receivers unless stripped by the cable operator. Indeed, the cable operator would have to invest in additional digital equipment if it were to strip away part of the broadcast signal.

D. Carriage Of All Free, Over-the-Air Digital Broadcast Programs In Any Given Market Will Consume No More Than 11-12 Percent Of A 750 MHz Digital Cable System's Capacity

As explained above, carriage of the entire digital broadcast signal, whether it involves a single high definition or multiple standard definition programming, requires less capacity than the analog broadcast signal that already must be carried. In no instance would carrying the entire digital broadcast signal on a digital cable system require more than half of the bandwidth currently utilized for analog transmissions.[13]

Nearly all of the nation's local television markets have fewer than 18 television stations able to claim carriage rights on any particular cable system. According to a National Cable & Telecommunications Association study conducted by PDS

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[13] As provided by the Statute, any ancillary service offered on a subscription basis is not subject to the must-carry requirement. *See* 47 U.S.C. § 336(b)(3). Our references to multicast and multiple programs includes only those that are delivered free, over-the-air to viewers using a single DTV channel as licensed by the FCC.

Consulting,[14] the six markets with the most local, full power television stations have between 17 and 21 stand alone commercial stations. Assuming that none of these markets have more than 3 noncommercial stations able to claim carriage on any specific cable system, no cable system will be required to carry more than 24 local digital stations. Those 24 stations collectively would require no more than 72 MHz of digital cable capacity, even if each signal involved multiple programming streams. In turn, 72 MHz is but 11 percent of the cable system's capacity, a far cry from the 33 percent maximum statutory allocation to carriage of local television stations.

Cable is quickly converting its subscribers to all-digital, and the widespread entry of digital cable-ready television sets into the market beginning this year will accelerate the conversion for cable as well as for broadcasters. Even as cable systems completed their system rebuilds in 2003, they boasted over 30 percent of subscribers exclusively on the digital tier.[15] It appears that many cable systems will have a majority of digital subscribers within two or three years and will begin discontinuing analog services as soon thereafter as possible. Already, Charter Communications has announced its operation of an all-digital system in Long Beach, California.[16]

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14 *See Ex Parte* letter, from Daniel Brenner, National Cable & Telecommunications Association, to Chairman Michael Powell, CS Docket No. 98-120 filed Oct. 16, 2001 (containing a PDS Consulting report titled "Cable TV System Capacity").

15 The number of digital subscribers grew from 9.7 million at the end of 2000 to an estimated 22 million plus at the end of 2003. *See NCTA, 2003 Year-End Industry Overview*, at 1.

16 *See* Charter Activates All-Digital TV Service, News Release (Jan. 15, 2004).

The combination of cable systems having been upgraded to 750+ MHz and the increased transmission efficiency of digital technology provides cable operators with three or four times more effective capacity than their analog systems in 1992, when the must-carry requirement was enacted by Congress.

II. THE PUBLIC POLICY JUSTIFICATION FOR POST-DTV TRANSITION MULTICAST MUST-CARRY IS EVEN MORE COMPELLING THAN THE STRONG GOVERNMENTAL INTEREST THAT SUSTAINED THE MUST-CARRY PROVISIONS OF THE 1992 CABLE ACT

In the 1992 Cable Act, Congress required every cable system in a particular television market to retransmit on its most basic tier the signals of all local television stations whose operators request carriage, up to one-third of the total capacity available on the cable system.[17] Congress enacted these provisions after years of hearings based upon very specific legislative findings. In particular, Congress determined that there was a substantial government interest in preserving the benefits of free, over-the-air local broadcast stations, promoting the widespread dissemination of information from a multiplicity of sources to cable and non-cable consumers alike, and promoting fair and vigorous television competition.[18] These legislative findings were accorded great weight by the Supreme Court when it twice upheld the constitutionality of must-carry.[19]

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17 47 U.S.C. §§ 534, 535 (1992). *See* fn. 5 for how the FCC calculates available capacity for digital systems.

18 Pub. L. 102-385 §§ 2(a)(10-16).

19 *See, Turner Broadcasting System, Inc. v. F.C.C.*, 512 U.S. 622 (1994) ("Turner I"); 520 U.S. 180 (1997) ("Turner II").

The very same governmental interests that were so important in 1992 remain as, if not more, critical today. Vibrant and fair competition between cable and broadcast television is fundamental to the preservation of choices available to viewers, advertisers, and programmers alike. Moreover, despite the 1992 Cable Act, economic power in the media marketplace has shifted in the last decade even more drastically toward cable and away from broadcasting. Finally, there are additional substantial government interests today that were not even present in 1992. Must-carry was publicly beneficial and constitutionally sustainable in 1992; the justification for multicast must-carry in the digital era is overwhelming.

A. The Market Power of Cable Today Vis-á-Vis Broadcasting Dwarfs What It Was in 1992

In 1992, Congress found that shifting market shares and ad revenue from broadcasting to cable would undermine the economic ability of broadcasting to serve the public and the longstanding values of diversity, competition and localism.[20] In detailed statutory findings, Congress concluded that "because cable systems and broadcast stations compete for local advertising revenue, and because cable operators have a vested financial interest in favoring their affiliated programmers over broadcast stations, cable operators have a built-in 'economic incentive . . . to delete, reposition, or not carry local broadcast signals.'"[21] Accordingly, "Congress designed the must-carry provisions . . . to prevent cable operators from exploiting their economic power to the detriment of

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20 Pub. L. 102-385, §§ 2(a)(14-16).

21 *See Turner I*, 512 U.S. at 646.

broadcasters, and thereby to ensure that all Americans, especially those unable to subscribe to cable, have access to free television programming - whatever its content."[22]

The continued trends of vertical and horizontal integration in the cable industry since 1992 underscore that Congress was right to adopt must-carry in 1992. Multiple court decisions have struck down former limits on the extent of cable systems a single party could own and have eliminated any prohibition against a cable operator acquiring as many television stations as any other company. A leading cable system operator now owns a top-6 television broadcast network.

Likewise, the shift in market power from broadcasting to cable, and the attendant threat to the viability of broadcasting as a competitive distribution medium, is far greater than Congress anticipated in 1992. As of last year, cable television networks accounted for over *fifty percent* of all prime time television viewership, having eclipsed the combined total of the major broadcast networks.[23] In part, this is another result of the expansion in services made possible by the digital transition: the sheer numbers of

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22 *Id.*

23 *See* 2002/2003 Full Season Viewership Results: Ad-Supported Cable Captures Almost a 50 Primetime Share, Cable television Advertising Bureau Press Release (Sept. 17, 2003), *available at* http://www.cabletvadbureau.com/03PressReleases/030917.htm ("In a 2002/2003 season capped by 16 consecutive weeks of 50+ primetime shares, ad-supported cable averaged almost a 50 share for the full 12-month period-topping the seven broadcast networks (ABC, CBS, NBC, FOX, UPN, WB, PAX) by 4.6 share points. The final results for the complete 2002/2003 season (9/23/02-9/14/03) based on a Cable television Advertising Bureau analysis of Nielsen data are: ad-supported cable recorded an average primetime U.S. household share of 49.6 (+3.8 versus the same period a year ago) compared to a collective 45.0 share (-3.8 percent) for the seven broadcast networks.").

programming services able to be carried by modern cable operators have created a more fragmented audience.

While the audience has become more splintered, the cable television industry has become more consolidated, both nationally and locally. The phenomenon of "clustering" cable television systems has resulted in local cable consolidation exceeding fifty percent in twenty of the top twenty-five markets. In 10 of the top 20 markets, a single cable operator claims more than 75% of all cable subscribers. In the San Francisco-Oakland-San Jose DMA, one cable operator owns systems serving 95 percent of all local cable subscribers.

Cable Consolidation

LOCAL CONCENTRATION

DMA #	Market	Lead MSO	% Control by largest MSO
1	New York	Cablevision	52%
2	Los Angeles	Adelphia	40%
3	Chicago	Comcast	93%
4	Philadelphia	Comcast	84%
5	San Francisco	Comcast	95%
6	Boston	Comcast	76%
7	Dallas	Comcast	63%
8	Washington	Comcast	60%
9	Atlanta	Comcast	62%
10	Detroit	Comcast	78%
11	Houston	Time Warner	73%
12	Seattle	Comcast	86%
13	Minneapolis	Comcast	39%
14	Tampa	Time Warner	76%
15	Miami	Comcast	73%
16	Phoenix	Cox	69%
17	Cleveland	Adelphia	42%
18	Denver	Comcast	93%
19	Sacramento	Comcast	82%
20	Orlando	Time Warner	80%
		Average	71%

Nielsen Media Research

Cable clustering has an enormous impact on competition for local advertising revenue. Today, a major cable MSO making one hundred channels available in a local market receives approximately nine hundred prime time advertising minutes per day while each major television network affiliate in the market has approximately thirty minutes per day. Not coincidentally, cable operators now claim roughly twice as much local advertising revenues as they did in 1994.[24]

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[24] John M. Higgins, They Discovered a Business: Once haphazard, local cable ad-sales effort is now taking from local stations, *Broadcasting and Cable*, (June 17, 2002) (*citing* data of Veronis Suhler Associates).

The loss of revenues and rising programming costs also are eroding the ability of local television stations to continue to provide the same level of programming that Congress sought to protect in 1992. For example, in the four year period ending in 2002, 42 stations terminated local news programming as they were unable to continue to afford the fixed costs associated with such programming based on the advertising revenues available from a single programming stream.[25] On the national level, multiple programs, including, for example, the NBA All-Star Game and other sporting events, have shifted from broadcast to cable. The loss of such programming formerly available on free, over the air stations has diminished the choices available to cable and non-cable consumers alike.

In the face of cable clustering and the continuing decline of local broadcast television's ability to compete for advertising dollars, multicast must-carry is vital for maintaining the availability of free, over-the-air local television programming as intended by Congress in the 1992 Cable Act. Multicast carriage multiplies the minutes of advertising able to be sold by local stations without burdening consumers with more advertising per programming hour. Multicasting thus offers local television broadcasters their best hope of regaining sufficient local advertising revenue to maintain or restore the level of broadcast service Congress sought to preserve in a cable clustered world.

B. New Substantial Government Interests That Did Not Even Exist in 1992 Warrant Adoption of Multicast Must-carry in the Digital Era

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25 *See Special Factual Submission in Support of Multicast Carriage by the NBC Television Affiliates Association* at 15-16, CS Docket No. 98-120 (dated January 8, 2004).

When the 1992 Cable Act was enacted, digital television was embryonic.[26] By 1997, however, Congress had codified the nation's march toward conversion from analog to digital television, establishing a "soft" target date of December 31, 2006 for the shut off of analog broadcast signals.[27] Congress and the FCC have invested enormous time and resources in the past decade to accelerate the DTV transition, and there is a broad consensus that the DTV conversion is an important national policy.

The predominant governmental interests in completing the DTV transition are to: (1) bring to consumers the benefits of digital technology with its potential for more programming options and advanced services; (2) avoid disrupting consumers' television use by stranding large numbers of consumers with analog-only receivers; and (3) return urgently needed spectrum and make it available for public safety and commercial wireless technology applications. In introducing the Homeland Emergency Response Operations ("HERO") Act,[28] Representative Jane Harmon (D-CA) made clear the overarching governmental interest in converting to digital television:

> "The September 11 attacks made it abundantly clear that our first responders are in dire need of improved communications... The HERO Act seeks to remedy this problem by providing first responders with badly needed access to broadcast frequencies for communications."[29]

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26 The FCC did not adopt the DTV terrestrial broadcast standard until late 1996, *see Fourth Report and Order* in MM Docket No. 87-268, 11 FCC Rcd 17771 (1996).

27 Omnibus Budget Act of 1997, 47 U.S.C. § 309(j)(14)(A).

28 H.R. 3397 (introduced Dec. 4, 2003); H.R. 1425 (introduced March 25, 2003).

29 *See* "Harman Weldon Introduces Bill to Provide Improved Communications for First Responders. Legislators Reintroduce Homeland Emergency Response Operations ("HERO"). Press Release of Congresswoman Jane Harman (March 25, 2003), available at http://www.house.gov/harmon/press/relaeases/2003/032504RR_HERO.html. *See also*, Statement (continued...)

Multicast carriage – which will encourage broadcasters to offer multiple programming streams – will increase the incentives for consumers to transition to digital and speed the digital transition. The return of broadcasters' analog spectrum incident to the conversion to digital also has enormous potential to spark innovation and create new jobs in wireless communications services.

III. PLANNED BROADCASTER MULTICAST OFFERINGS WILL ADVANCE SUBSTANTIAL GOVERNMENT INTERESTS

According to public filings made by broadcasters to the Federal Communications Commission,[30] broadcasters are planning to serve consumers with a combination of visually superior high definition programming coupled with multiple new channels that will deliver enormous benefits to local viewers.

Through multicasting, broadcasters will have new channels on which they may utilize their extensive local news resources with extended coverage and deeper analysis than is possible in a traditional 30-minute newscast. An entire multicast channel can be dedicated to all day, ongoing local news reporting. At the same time, multiple digital channels enable a broadcast station to offer more targeted news; for example, one New York newscast focused on Northern New Jersey, a second focused on New York City, and a third on Connecticut, all multicast by the same station. The benefits are not limited

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30 *See Special Factual Submission in Support of Multicast Carriage by the NBC Television Affiliates Association* in CS Docket Nos. 98-120, 00-96 and 00-2 (filed Jan. 8, 2004) ("*NBC TV Affiliates Assoc. Jan. 8, 2004 Factual Submission*"); Letter from Walter Liss of ABC, Inc., to Chairman Michael Powell and Commissioners Kathleen Abernathy, Michael Copps, Kevin Martin, and Jonathan Adelstein in CS Docket Nos. 98-120, 00-96 and 00-2 (filed Nov. 20, 2003)(concerning an "Update on ABC's Owned Stations' Multicasting Plans").

to an expansion of traditional reporting. Multicast channels could be used to broadcast entire events such as parades, marathons, political speeches and debates, concerts, and even local scholastic or professional sports. Viewers also would benefit from a channel dedicated to local weather, traffic, travel, and alerts.

The potential benefits of multicasting on Americans for whom English is a second language cannot be overstated. Hispanics in markets as large as Atlanta, Denver, Phoenix, Detroit, and many others have access to one or zero full power over-the-air Spanish language stations. With multicasting, the scarcity and high cost of broadcast stations is largely resolved, as a market with only 10 broadcast signals effectively becomes a market with dozens of broadcast signals. Many local television stations are eager to serve their market's Spanish-language audience; they could use their allotted spectrum to affiliate with one of the Spanish-language networks, or start their own competitive local Spanish service.[31]

Indeed, many U.S. markets have only a few television stations and lack not only Telemundo and Univision programming, but also Fox, WB, UPN, Paxson, and religious national networks. In these markets, the explosion of new over-the-air programming choices would be a much welcomed benefit of the digital transition, particularly for the millions of lower-income families who do not subscribe to cable and rely on broadcast for all of their television programming.

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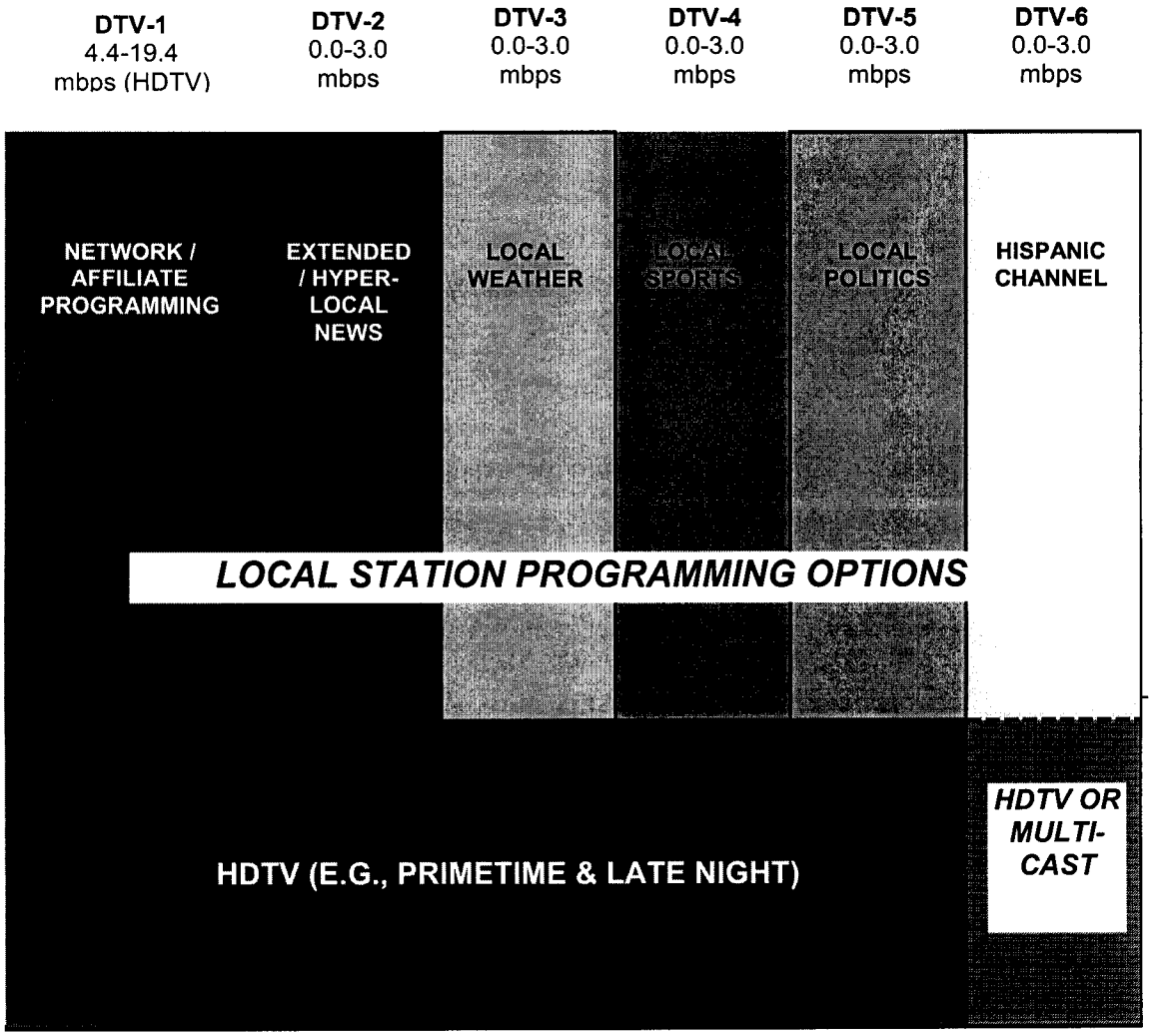
[31] *See NBC TV Affiliates Assoc. Jan. 8, 2004 Factual Submission*, Exhibit E (Declaration of Jim Keeler, President and CEO, Liberty Corporation).

DIGITAL MULTICAST PROGRAMMING POSSIBILITIES



These are the types of programs long held by all parties to be highly desirable and in the public interest. However, without multicast must-carry, these services could be denied to cable households, making it difficult, if not impossible, for broadcasters to make the investments necessary to launch and operate the services.

IV. CONCLUSION

There is no legitimate claim of cable spectrum scarcity. Cable carriage of all local broadcast signals is as essential or more so today than in 1992 when Congress enacted the requirement. Mandating cable carriage of all free, over-the-air broadcast programming will vindicate fundamental government interests and is needed urgently.